Buderus

# User manual

## Gas Boiler
## Logano GC124 II/SP

**WARNING!**
If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

**WHAT TO DO IF YOU SMELL GAS!**

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the Fire Department.
- Installation and service must be performed by a qualified installer, service agency or gas supplier.

**NOTICE: This manual must be retained for future reference.**

# 1 For your Safety

The Logano GC124 II/SP atmospheric gas boiler has been designed and constructed using the newest technology available. User friendliness was taken into account during the design process. Following the safety references and operating instructions will take advantage of the economical and environmentally friendly design of your boiler.

## 1.1 Correct Use

The Logano GC124 II/SP atmospheric gas boiler is designed to heat water for a hot water heating system for heating single or multiple occupancy buildings.

## 1.2 Observe the following symbols

Symbols for identification of dangers and user instructions:

WARNING!

**RISK TO LIFE**

Identifies possible dangers originating from the product, which might lead to serious injury or death if proper care is not taken.

CAUTION!

**RISK OF INJURY/ SYSTEM DAMAGE**

Identifies potentially dangerous situations, which might lead to medium or minor injuries or to material losses if proper caution is not followed.

**USER NOTE**

Guidelines for the optimum use and setting of the control(s) plus other useful information.

## 1.3 Observe the following guidelines

Property damage may occur if the boiler is not used properly.

- Do not operate the boiler if damage is present.
- Have the heating system installed by a qualified installer, service agency or gas supplier.
- Have the installer explain the operation of the heating system.
- Read this user manual thoroughly.

WARNING!

**RISK TO LIFE**

due to neglecting your own safety in case of emergency, such as with a fire.

- Never put yourself at risk. Your own safety must always take priority.

WARNING!

**RISK TO LIFE**

from explosion of flammable gases.

- If you smell gas there is a danger of explosion.
- No open flame! No smoking.
- Prevent spark formation. Do not operate electrical switches, including telephones, plugs or door bells.
- Close main gas valve.
- Open doors and windows.
- Warn other occupants of the building, but do not use door bells.
- Leave the building.
- Call gas company and fire department from outside the building.

### 1.3.1 Information on the boiler room

WARNING!

**RISK TO LIFE**

due to poisoning.

Insufficient ventilation or combustion air availability may cause dangerous flue gas leaks or formation.

- Make sure that inlets and outlets are not reduced in size or closed.
- If faults are not corrected immediately, the boiler must not be operated until all faults have been corrected.

WARNING!

**FIRE DANGER**

due to flammable materials or liquids.

- Make sure that there are no flammable materials or liquids in the immediate vicinity of the boiler.
- Maintain a minimum distance of 15 inches from the boiler.

WARNING!

**RISK TO LIFE**

due to water damage.

- Do not use the boiler if any part has been submerged in water.
- Contact a qualified service technician to check and replace any components submerged in water.

CAUTION!

**SYSTEM DAMAGE**

due to freeze.

- Make sure the boiler room stays above freezing.

### 1.3.2 Performing work on the heating system

WARNING!

**RISK TO LIFE**

from explosion of flammable gases.

- Make sure that a qualified company installs the boiler, connects gas and venting connections, places the boiler in operation, connects the electrical power, and maintains and repairs the boiler.

**Other important information!**

- Do not use this boiler if any part has been under water. Immediately call a qualified service technician to inspect the boiler and to replace any part of the control system and any gas control which has been under water.
- Should overheating occur or the gas supply fail to shut off, do not turn off or disconnect the electrical supply to the pump. Instead shut off the gas supply at a location external to the boiler.
- The venting system must be inspected yearly. Replace any parts that show signs of deterioration from corrosion or any other sources.
- The boiler must be inspected yearly by a qualified service agency. The inspection must include the main burners, pilot burner, boiler flue, vent collector and venting system. Replace any parts that show signs of deformation from corrosion or other sources.

# 2 Product description

The GC124 II and SP model boilers are low temperature atmospheric gas-fired boilers.

The boilers consist of:

– Ignition module (only for GC124 II model) and Honeywell aquastat
– Boiler jacket and front door
– Boiler block with insulation
– Gas burner

The ignition module and aquastat monitor and control all electrical components of the boiler.

The boiler jacket prevents energy loss and acts as soundproofing.

The boiler block transfers the heat generated by the burner to the boiler water. The insulation prevents energy loss.

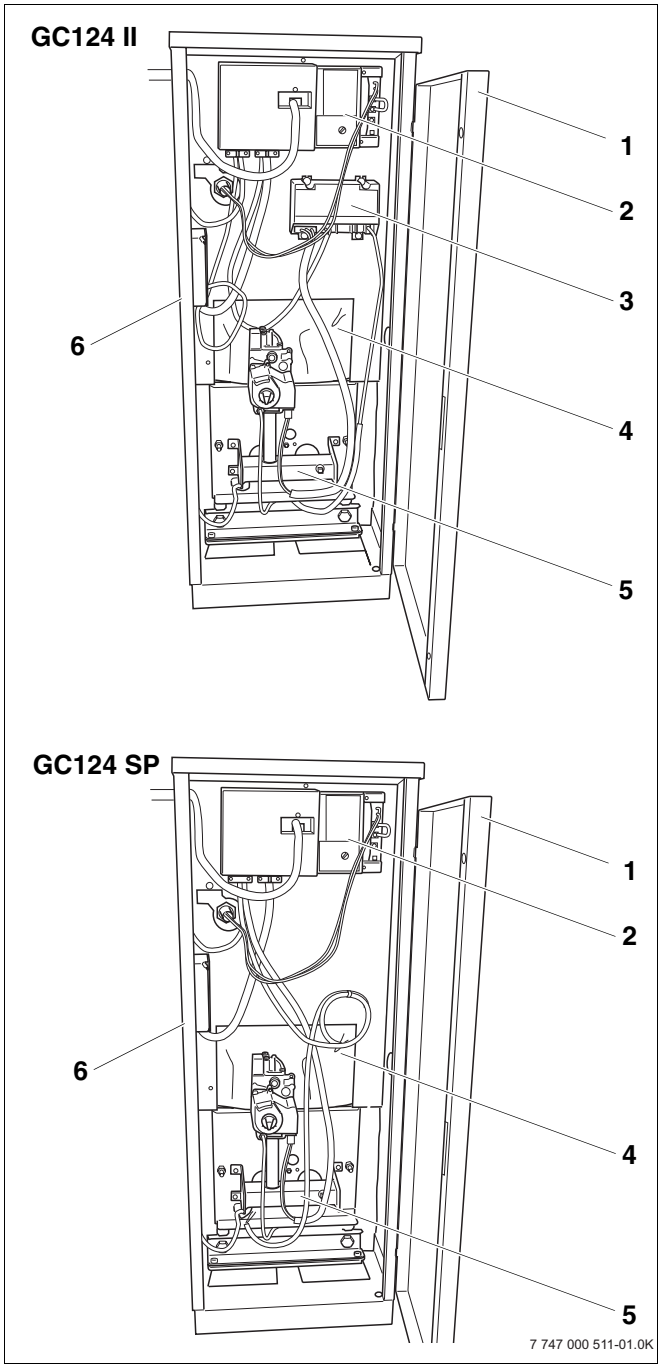


*Fig. 1 Logano GC124 II and SP boiler*

***1*** *Boiler front door*
***2*** *Aquastat (boiler temperature control)*
***3*** *Ignition module (only for GC124 II model)*
***4*** *Boiler block with insulation*
***5*** *Gas burner*
***6*** *Boiler jacket*

# 3 Start-up instructions

**Read the instructions and warnings on ➔ page 2 before start-up for your safety.**

**WARNING!**

**RISK TO LIFE**

due to not observing the start-up instructions and resulting incorrect operation.

- If these instructions are not followed exactly, a fire or explosion may be caused with serious property damage or loss of life or serious injury.
- Observe the start-up instructions.

**USER NOTICE**

**GC124 II only:**

This boiler is equipped with an electronic ignition system which automatically will light the pilot burner. Do not try to maunally light the pilot burner.

**GC124 SP only:**

This boiler is equipped with a pilot burner that must be lit by hand. Please follow the instructions in ➔ Chapter 3.2, page 7, when lighting the pilot burner.

## 3.1 Operating instructions for GC124 II models

**STOP! First read the safety instructions on➔ page 2 start-up warnings on ➔ page 5 of these instructions**

1. Set thermostat to the lowest value.
2. Disconnect the heating system from the power supply.
3. Shut off main gas supply.
4. Open the boiler front door.

**WARNING!**

**RISK TO LIFE**

Due to fire or explosion.

- Never use excessive force, when adjusting the gas control knob (➔ Fig. 3).
- Adjust the gas control knob only by hand.
- Never use a tool for adjusting the gas control knob.
- If you can not turn the gas control knob by hand, do NOT try to repair it.
- Contact a qualified service organization at this point.

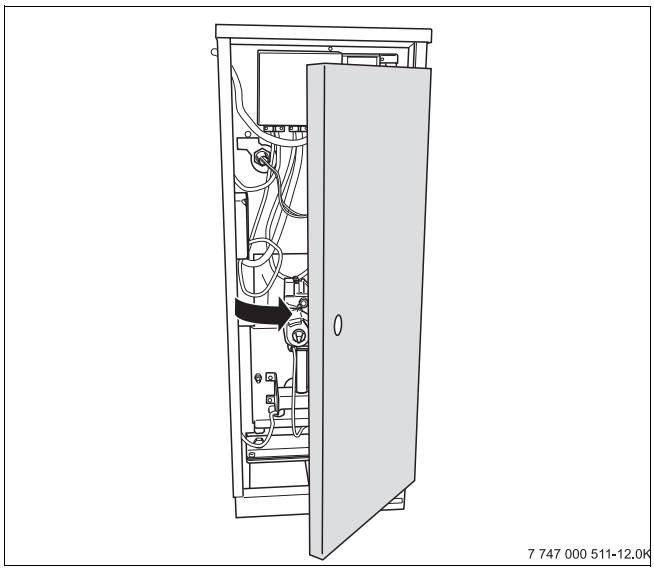


*Fig. 2 Removing front door of boiler*

5. Turn the gas control knob clockwise in the "OFF" position. Do not use excessive force.

**WARNING!**

**RISK OF LIFE**

due to ignition of flammable gases.

- Wait 5 (five) minutes until all gas odors have disappeared. Check to see if any gas odors remain, also at floor level. In case gas odors are still present, shut off gas supply, shut electrical power to the boiler and inform the service organization or local gas utility company.

6. If you do not smell any gases, proceed to the next step.

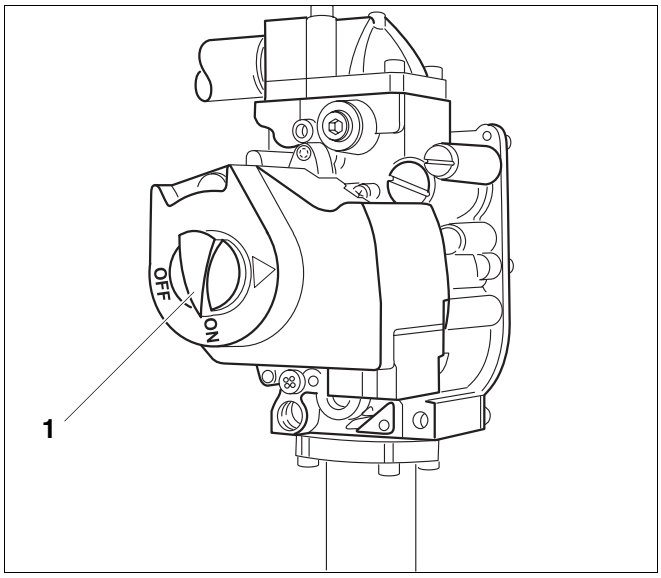


*Fig. 3 Gas valve*

***1*** *Gas control knob (shown in the "ON" position)*

**USER NOTE**

This unit is equipped with an automatic ignition system which automatically starts the pilot burner. Do not attempt to ignite it manually.

7. Turn gas control knob counterclockwise to ON position. Do not use force.
8. Close boiler front door.
9. Open main gas supply.
10. Turn on electric power to heating system.
11. Set thermostat to desired room temperature.
12. If the heating system does not start operating, follow the instructions for turning off gas supply to boiler (➔ Chapter 3.3, page 10) and inform your customer service technician or your gas company.

## 3.2 Operating instructions for GC124 SP models

**STOP! First read the safety instructions on➔ page 2 start-up warnings on ➔ page 5 of these instructions**

1. Set thermostat to the lowest value.
2. Disconnect the heating system from the power supply.
3. Shut off main gas supply.
4. Open boiler front door.

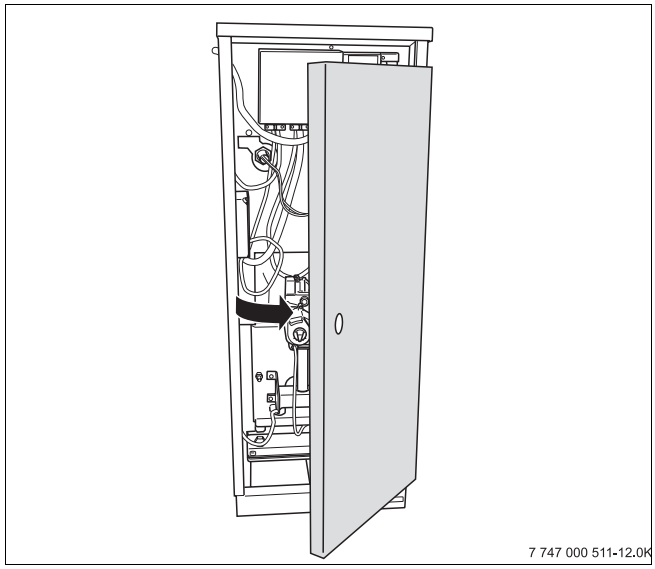


*Fig. 4 Removing front door of boiler*

WARNING!

**RISK OF LIFE**

Due to fire or explosion.

- Never use excessive force, when adjusting the gas control knob (➔ Fig. 5).
- Adjust the gas control knob only by hand.
- Never use a tool for adjusting the gas control knob.
- If you can not turn the gas control knob by hand, do NOT try to repair it.
- Contact a qualified service organization at this point.

**5.** Turn the gas control knob clockwise in the "OFF" position. Do not use excessive force.

WARNING!

**RISK OF LIFE**

Due to ignition of flammable gases.

- Wait 5 (five) minutes until all gas odors have disappeared. Check to see if any gas odors remain, also at floor level. In case gas odors are still present, shut off gas supply, shut electrical power to the boiler and inform the service organization or local gas utility company.

**6.** If you do not smell any gases, proceed to the next step.

**7.** Open main gas supply.

**USER NOTE**

This unit is equipped with an pilot burner that must be ignited manually. Follow the instructions below to light the pilot burner.

**8.** Turn gas control knob (➔ Fig. 5) clockwise to the PILOT position.

**9.** Push and hold the red pilot ignition button (➔ Fig. 5) in.

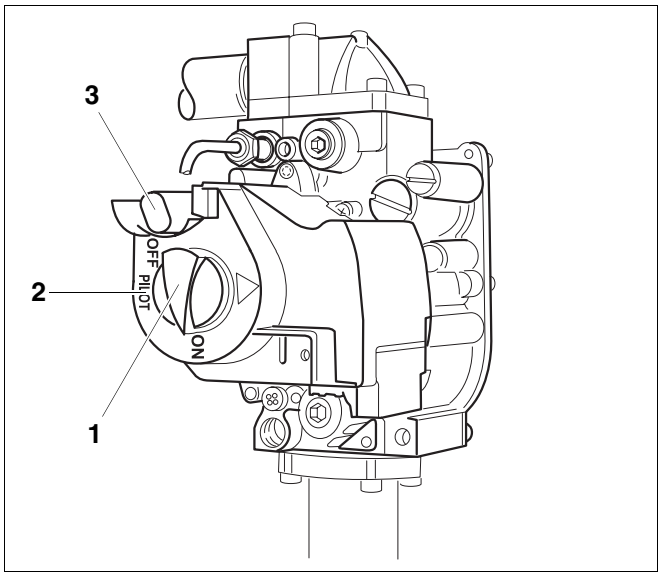


*Fig. 5 Gasarmatur GC124 SP*

***1*** *Gas control knob (shown in the "ON" position)*

***2*** *"PILOT" position*

***3*** *Red pilot ignition button*

**10.** Light the pilot burner with a match using the furnished match holder. Insert the lit match through the sight glass (➔ Fig. 6).

**11.** After lighting the pilot, keep the red pilot ignition button pressed in for an additional minute (➔ Fig. 7).

**12.** Release red pilot ignition button (➔ Fig. 7). The red pilot ignition button should move back and the pilot burner should remain lit. If the pilot burner shuts off, turn the gas control knob back to "OFF", and shut off the main gas supply. Power done the heating system and contact your heating service contractor or gas utility company.

**WARNING!**

**RISK TO LIFE**

due to poisoning by leaking gas.

If the red pilot ignition button does not pop up when you release it, you must proceed with the following steps:

- When the pilot burner shuts off after repeated lighting attempts, you must shut off the gas control knob to "OFF" to avoid spillage of gas.
- Shut off main gas supply.
- Contact your service technician or gas supplier immediately and have the fault repaired.

**13.** Turn gas control knob (➔ Fig. 7) counterclockwise to ON position. The gas control knob can only be set to ON if the red pilot ignition button is out (➔ Fig. 7).

**14.** Close boiler front panel.

**15.** Open main gas supply.

**16.** Turn on electric power to heating system.

**17.** Set thermostat to desired room temperature.

**18.** If the heating system does not start operating, follow the instructions for "switching off gas supply to boiler" (➔ Chapter 3.3, page 10) and inform your customer service technician or your gas company.

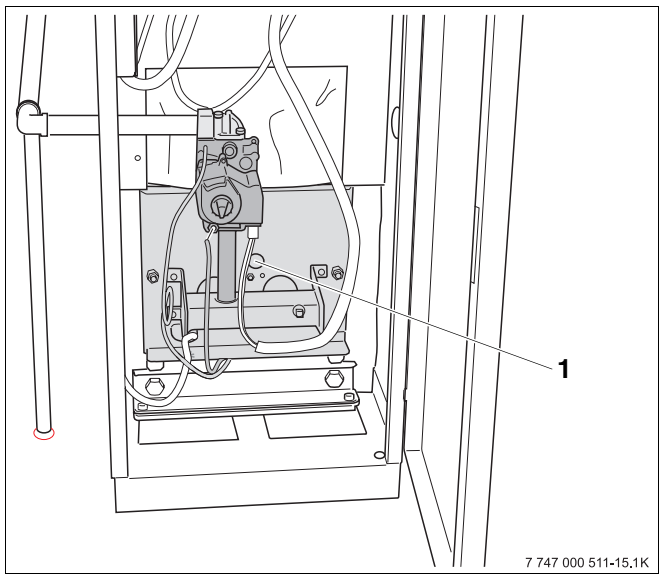


*Fig. 6 GC124 SP boiler*

***1*** *Sight glass*

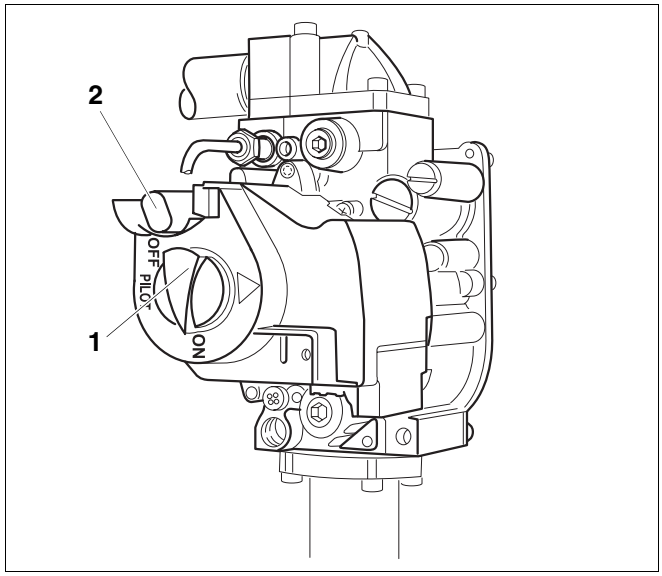


*Fig. 7 GC124 SP gas valve*

***1*** *Gas control knob (shown in the "ON" position)*

***2*** *Red pilot ignition button*

## 3.3 Shutting off gas supply to boiler

1. Set thermostat (optional) to the lowest value.
2. Disconnect heating system from the power supply before carrying out maintenance work.
3. Open boiler front door.

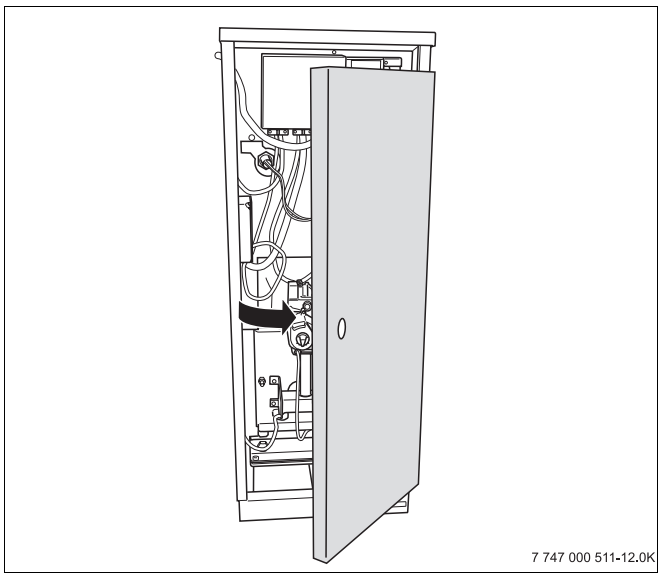


*Fig. 8 Open boiler front door*

4. Turn gas control knob clockwise to the OFF position. Do not use excessive force.
5. If necessary, shut off main gas supply.
6. Close boiler front door.

**Flame roll-out switch**

The boiler is equipped with a flame roll-out switch. If the venting system of the boiler is blocked, the flame roll-out switch will respond. Do not try to turn on the boiler. Inform a qualified service company. The venting system of the boiler must be checked for blockage and the flame roll-out switch must be replaced. The flame roll-out switch is for one-time use only. Do not try to use it again.

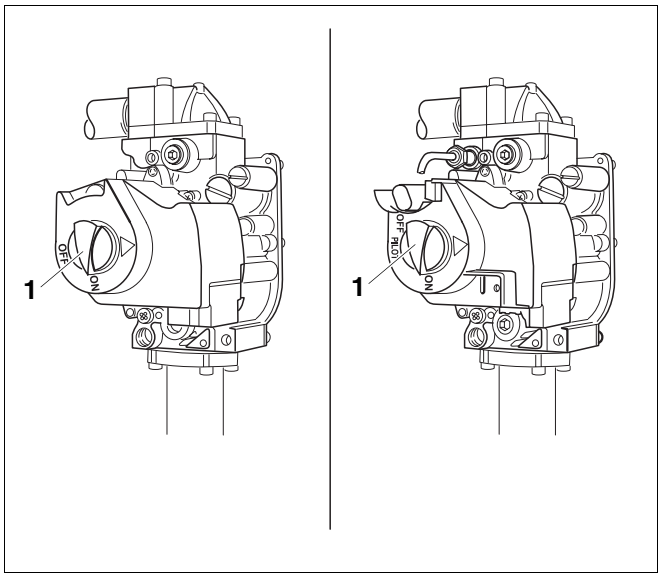


*Fig. 9 Gas valve (GC124 II left, GC124 SP right)*

***1*** *Gas control knob (shown in the "ON" position)*

# 4 Taking the heating system out of operation

## 4.1 Normal system shut-down

1. Turn ON/OFF switch (emergency shutoff switch) to OFF position. This shuts off power to the boiler and all of its components (e.g. burner, aquastat).
2. Close gas shut off.

**CAUTION!**

**SYSTEM DAMAGE**

due to freezing.

The heating system can freeze up in cold weather if it is shut down.

- Leave the heating system switched ON constantly as much as possible.
- Protect the heating system from freezing by draining the boiler and water pipes at the lowest point.

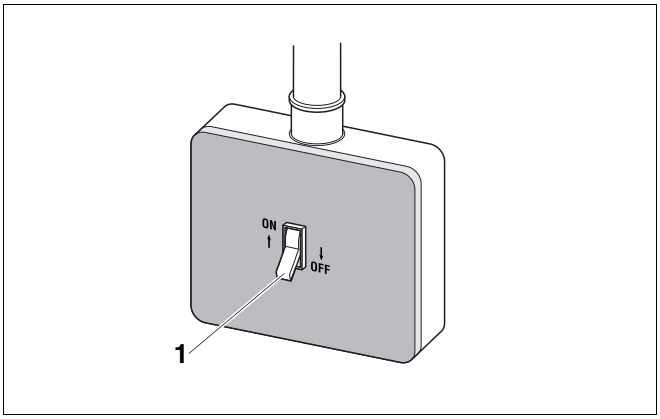


*Fig. 10 System shut-down*

***1*** *ON/OFF switch (emergency shut off switch)*

## 4.2 Emergency shut-down procedures

Perform this procedure in case of emergency:

1. Never put yourself at risk. Your own safety must always take priority.
2. Shut off main gas supply.
3. Shut down the heating system using the boiler emergency shutoff switch or the corresponding circuit-breaker.

Your installer:

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